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(54) Title: PREPARATION OF SUPRAMOLECULAR POLYMERS CONTAINING QUADRUPLE HYDROGEN BONDING
UNITS IN THE POLYMER BACKBONE

(57) Abstract: The present invention relates to a supramolecular polymer comprising quadruple hydrogen bonding units within the polymer backbone, wherein at least a monomer comprising a 4H-unit is incorporated in the polymer backbone via at least two reactive groups up to four reactive groups, provided that the 4H-units are not covalently incorporated in the polymer backbone through one or more silicon-carbon bonds. The invention also relates to processes for preparing such supramolecular polymers and their use in personal care applications, surface coatings, imaging technologies, biomedical applications, (thermo)reversible coatings, adhesive and sealing compositions and as thickening agents, gelling agents and binders.

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Statement under Art. 19(1) PCT

Guan et al., *Polymeric Preprints* 2003, 44(2), 485 – 486, discloses a supramolecular polymer wherein 4H-units are incorporated in a polymer backbone via positions 2 and 6 of the pyrimidone ring, wherein the polymer is prepared by reacting 1,4-diisocyanatohexane with 1-[6-(hydroxybutyl)-4-oxo-1,4-dihydro-pyrimidin-2-yl]-3-(3-hydroxypropyl)urea, the latter being a monomer having two identical reactive OH groups.